

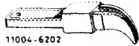
## 05—270 Replacement of valve stem seals

Valve clearance	with engine cold (approx. 20 °C)	with engine warm (60 °C ± 15 °C)
Intake	0.10 <sup>1)</sup>	0.15 <sup>1)</sup>
Exhaust	0.20	0.25

<sup>1)</sup> 0.05 mm higher during lasting outside temperatures below –20 °C.

Tightening torques	Nm
Nuts for cylinder head cover	15
Valve adjusting screws	20–40

### Special tools

Magnetic lifter for valve cone halves		116 589 06 63 00
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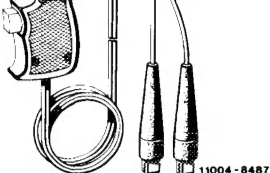
Pressure lever for valve spring		123 589 03 61 00
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Assembly mandrel for valve stem seals intake 9 mm dia.		116 589 00 43 00
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Assembly mandrel for valve stem seals exhaust 11 mm dia.		116 589 01 43 00
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Valve adjusting wrench 17 mm, 1/2" square		110 589 00 01 00
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Socket 27 mm, 1/2" square, for rotating engine		001 589 65 09 00
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Contact handle for rotating engine (component of compression pressure recorder (compressometer) 001 589 46 21 00)		001 589 46 21 08
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### Conventional tool

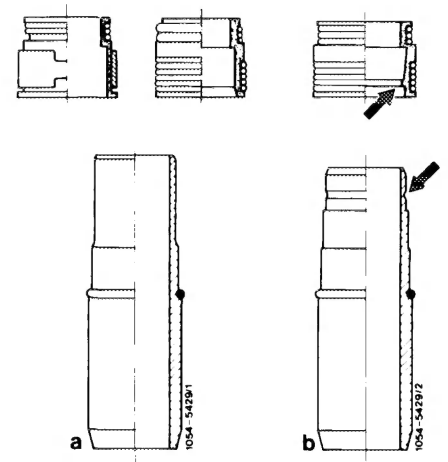
Cylinder leak tester	e.g. made by Bosch, EFAW 210 A and by SUN, CLT 228
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## Note

Valve stem seals including assembly sleeves are supplied in repair kit.

Exhaust valve guides which are worn out at holding groove for valve stem seal must be replaced (arrows).

a Intake  
b Exhaust

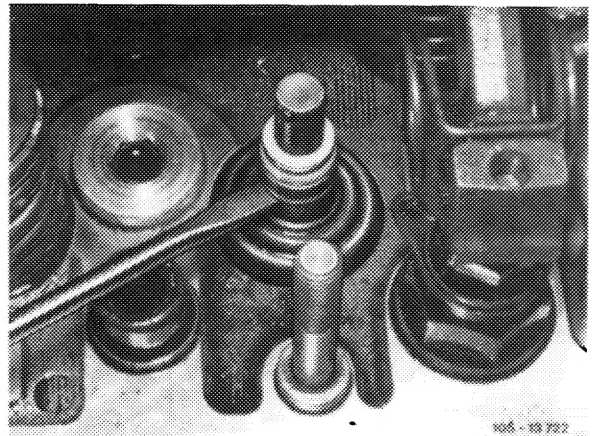


## Renewing

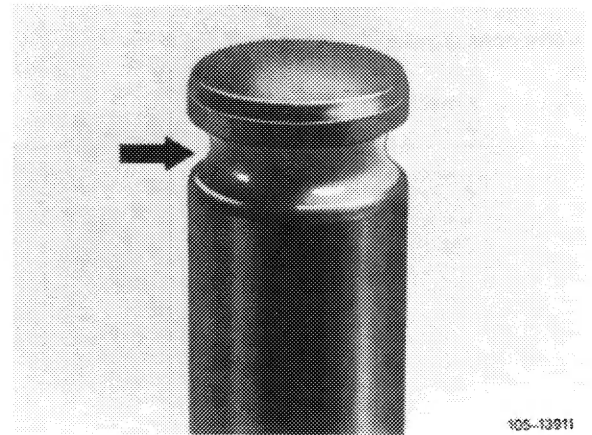
- 1 Remove valve springs (05—250).
- 2 Press off valve stems by means of a screw driver or pull off by means of pliers.

### Attention!

Do not damage valve stem and valve guide.



- 3 Debur valve stem at groove (arrow).
- 4 Renew worn out valve cone halves, spring retainers and thrust pieces.



- 5 Lubricate valve stem seals and mount by means of assembly mandrel.

For this purpose, place assembly sleeve on valve stem.

- 6 Install valve springs (05—250).
- 7 Adjust valve clearance (05—210).

